



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,974	04/12/2004	Randall A. Greene	2057/143	3086
22429	7590	06/02/2006	EXAMINER	
LOWE HAUPTMAN BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314			BLOUNT, ERIC	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/821,974	Applicant(s) GREENE, RANDALL A.	
	Examiner Eric M. Blount	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5 and 10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 5 and 10 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 5 and 10 are currently pending in the present application. Claims 1-4 and 6-9 have been cancelled:

Response to Arguments

2. Applicant's arguments with respect to claim 5 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley [U.S. Patent No. 3,775,745] in view of Augustin et al [WO 03/081554 A1] and in further view of Greene et al [U.S. Patent No. 6,986,582].

Regarding **claims 5 and 10**, Kelley discloses a helicopter having a turbine engine mounted therein (column 1, lines 5-8) and a "hot-start" avoidance system. The system comprises a warning device (column 1, lines 32-42), a data storage means and means for inputting a safe temperature profile for startup of a helicopter turbine engine, means for measuring the actual temperature profile during a startup of the helicopter turbine engine, and a means for actuating the warning device when the actual engine temperature during an engine startup falls outside of the safe temperature profile to thereby warn a pilot to abort the startup of a helicopter turbine engine (column 3, lines 16-60). Kelley does not explicitly disclose a data storage means for

Art Unit: 2612

inputting a temperature profile. However, it would have been obvious to one of ordinary skill in the art that safe temperature values would have to be stored so that the logic circuitry could determine if current conditions warranted an alarm. This meets the limitation. Kelly shows in column 3, lines 15-37, temperature ranges that indicate a hot start. This teaching meets the limitation of a temperature profile. Kelley does not disclose a collective and a tactile warning device operatively connected to the collective.

In an analogous art, Augustin discloses a method and apparatus for tactile cueing of aircraft controls. The invention warns pilots of approaching or exceeding limits on certain aircraft performance parameters (see abstract). Augustin discloses a collective (21) and a tactile warning device (29) operatively connected to the collective. Further, Kelley discloses that a safe operating temperature profile and other safe operating parameters during flight of the helicopter may be monitored (see column 1, line 33 – column 2, line 10). Augustin also discloses that several safe operating parameters may be monitored during the operation of the helicopter (see abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to modify the teachings of Kelley to include tactile warning device taught by Augustin because a combination would result in a system that was effective in warning a pilot of an alarm condition without diverting the pilot's attention from flying. There would be no need for the pilot to audibly or visibly observe an alarm output, instead, the pilot could operate the helicopter as usual and get a vibratory alert of an alarm condition from the helicopter controls.

Neither Kelley nor Augustin disclose a means for increasing the magnitude or frequency of the tactile warning. In an analogous art, Greene discloses a helicopter rotor/engine warning

Art Unit: 2612

comprising a means for increasing the magnitude or frequency of a tactile warning in response to the detection of dangerous conditions (column 1, lines 40-67 and column 3, lines 40-57). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to combine the teachings of the aforementioned inventors because the combination would result in a system capable of alerting a pilot of the severity of a dangerous or impending dangerous condition based upon the frequency or magnitude of the tactile alert. The pilot would be capable of determining this information without being distracted by an audible and/or visible warning.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

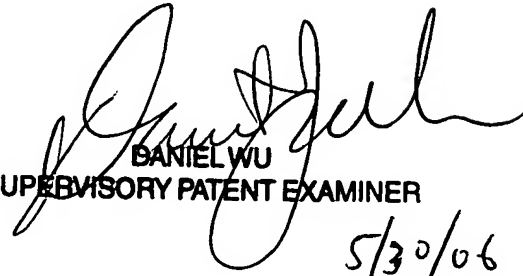
Art Unit: 2612

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M. Blount whose telephone number is (571) 272-2973. The examiner can normally be reached on Monday-Thursday 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric M. Blount
Examiner
Art Unit 2612


DANIEL WU
SUPERVISORY PATENT EXAMINER
5/30/06